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ABSTRACT

The study described in this report was intended to provide researchers with comprehensive, longitudinal baseline data on average children and their families. The study focused on positive growth and development by identifying a national sample of children and families for researchers to study. The children were examined in five main areas: (1) relationships with parents, peers and teachers; (2) behavior; (3) socioemotional well being; (4) health, and access to health care; and (5) standardized test results. The study also examined factors affecting children's positive achievement and found that the following factors mattered most: (1) good health; (2) reading; (3) parental presence; and (4) positive parental/child relationship. The study also provided evidence to support the importance of: (1) educated parents; (2) verbally able parents; (3) parents with high expectations; and (4) parents who spend quality time with their children. The report is organized into five sections. Part one provides an introduction to the study, while part two, "Measuring Children's Well Being," describes five indicators of children's well-being. Part three, "How Well Are Children Doing?" analyzes the data on children's well-being by indicator. Part four, "What Matters Most for Children's Achievement and Adjustment?" explains the most important aspects of positive child development. The final section of the report summarizes the general study conclusions. (Author/SD)

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Healthy Environments, Healthy Children

Children in [illegible]

by Sandra L. Hofferth
University of Michigan

PS 027250

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November 1998

Child Development Supplement

of the Panel Study of Income Dynamics

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Healthy Environments, Healthy Children:

Children in Families

A Report on

the 1997 Panel Study of Income Dynamics

Child Development Supplement

by Sandra L. Hofferth
University of Michigan

November 1998

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Table of Contents

Acknowledgements 2

Introduction 4

The Importance of Environment 4
A Comprehensive Study 4

Measuring Children's Well Being 6

Parents, Peers and Teachers 6
Health and Access to Health Care 6
Socioemotional Well Being 6
Standardized Tests 6

How Well Are Children Doing? 8

Children's Families 8
Children's Achievements 9
Positive Behaviors and Children's Lives 9
Children's Relationships with Parents, Teachers, Peers 9
Children's Health 11

What Matters Most for Children's Achievement and Adjustment? 12

Children's Families 12
Parent-Child Relationships 14
Children's Educational Activities 14
Children's Health 15
The Relationship Between Health and Development 15

Conclusions 16

Introduction

Children's experiences of family and home life, neighborhood and school are key to their health and development. Yet the past decades have witnessed many changes in these environments. We need to more fully understand how children's lives are being affected by these changes.

The Child Development Supplement to the Panel Study of Income Dynamics is a new nationally representative study designed to capture information on the many settings in which children live and learn. The data collected will allow researchers to identify children's connections to these settings, and the relationship of the settings to their health and social and cognitive development.

The Importance of Environment

Early stimulation is important to the growing brains and bodies of young children. A sufficient income and the presence of two parents during the early years are also crucial to a child's well being as a young adult.

However, children's home environments have been changing. On the one hand, more parents are raising children without partners and more families have two working parents. On the other, parents have more education, fewer children to care for, and more available child care options. Yet parents still wonder if they are making the best decisions. Parents want the best for their children, but don't always know what that is. This comprehensive study should provide some answers.

As a result of changes in home life and family structure, children's activities are changing. They spend more time out of the home, often in formal settings such as schools and centers. They spend less time in unstructured play. An important question is how the age at which children enter such settings, and the characteristics of the settings, affect their early health and development. As children reach school age, it is also important to see how their school and peer environments affect their health and development.

In the future this study will continue to follow these children, and will provide some answers to important questions about their out-of-home environments. This report is an initial look at children's lives, focusing on their home environment.

A Comprehensive Study

The Child Development Study is a supplement to the Panel Study of Income Dynamics (see box, page 5). The objective is to provide researchers with a comprehensive, longitudinal data base of average children and their families. Many studies focus on problem families and problem kids. This study focuses on positive growth and development as well. Only with access to a national sample of children and families can researchers study how all types of children develop into productive members of society.

In 1997, the Panel Study asked each of its families with children under age 13 to participate in the Child Development Study. The study obtained information on 3,586 children in 2,394 households.

In each family that gave permission, we conducted personal interviews with the primary caregiver about up to two of the family's children. Standardized tests taken in the home were used to assess the achievement of children aged 3 to 12. The parents reported on their perceptions of the child's progress to the interviewer, and filled out a self-administered questionnaire. Parents also filled out a 24-hour diary about one week day and one weekend day for each of their children who participated in the study.

A second caregiver also filled out a questionnaire. There is substantial interest in the involvement of fathers in the lives of their children. In many households, however, the second caregiver may be someone else, perhaps a grandmother, rather than a father or partner. Involvement of non-residential fathers with their children was asked of the father through a separate personal telephone interview.

The parents' permission was obtained to contact the child's teacher and school. Teachers and child care providers filled out additional information about the child and one of his or her school days.

This report provides a first picture of the data we collected. Data are adjusted to represent the entire population of U.S. children ages 0 to 12. Further results will be reported as they become available.

The Panel Study of Income Dynamics

A longitudinal survey of a representative sample of U.S men, women, and children and the families in which they reside.

Obtains information on family economics (income, occupation, wealth, expenditures on food and housing, transfer income), family structure (persons present in the family), marriage & divorce, births and deaths, health, type of housing.

Begun in 1968 with 5,000 families, the study completed its 30th year of data collection in 1997. Each year the same families are contacted. In addition, children who leave families to set up their own households are asked to participate. In 1997, the project interviewed almost 7,000 families, with over 19,000 individuals.

The data are used by over 1,100 researchers, journalists, and policy makers throughout the United States and Europe. Since 1968, over 600 journal articles, 250 books and book chapters, and 350 government reports, working papers, and dissertations have been based on the PSID.

Conducted at the Survey Research Center, Institute for Social Research, the University of Michigan.

Core funding is provided by the Economics and Sociology programs of the National Science Foundation. Additional funding comes from the U.S. Department of Health and Human Services, the National Institute on Aging, the National Institute of Child Health and Human Development, the U.S. Department of Agriculture, and the U.S. Department of Housing and Urban Development.

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Measuring Children's Well Being

How do we determine how well children are doing? By "doing well", we mean having positive relationships with parents, peers and teachers, being in good health, having access to health care, having few or no socio-emotional problems, and scoring well on basic tests of verbal and math achievement.

Parents, Peers and Teachers

Even if children are doing well on standardized tests, it is important to see whether they are living in warm, loving, supportive households. We asked the primary caregiver about the closeness of the child to his/her parents, the warmth of the child-parent relationship, and how well things were going in the child's life regarding parents, peers, and school.

Socioemotional Well Being

We used three measures for children 3 and older. The first is the Behavior Problems Index that was created by Nicholas Zill and James Peterson. It measures "the frequency, range and type of childhood behavior problems." Aggressive behaviors (such as bullying and being disobedient or destructive) and withdrawn or distressed behaviors (such as worrying or being unhappy) are included in the index.

The second measure we used is the ten-item Positive Behavior Scale created by Denise Polit. It taps the positive dimension of children's behavior, asking about characteristics such as being cheerful and happy, curious, liked by other children, obedient, and self-reliant.

Finally, parents were asked how often their school-age child was disobedient in school and whether the child had trouble getting along with teachers.

Health and Access to Health Care

We used measures of health and access to health care which have been used in previous reports on child health in the U.S.

Standardized Tests

We assessed children's verbal and math achievement using the Woodcock-Johnson Tests of Achievement. These include two verbal tests. Letter-word identification (for children 3 and older) tests symbolic learning. Passage comprehension (for mothers and children 6 and older) requires comprehension and vocabulary skills. The two math tests assessed ability to solve standard calculation problems (for children 6 and older) and practical problems (applied problems, for children 3 and older).

Measures of Well Being

Relationships with Parents, Peers, Teachers

- warmth of parent-child relationship
- closeness of parent-child relationship
- activities of parent and child together in past month
- how well things are going with the child
- number of friends the child has
- parents' involvement in school
- parent-child communication about school
- parents' expectations about how much education the child would complete

Child's Behavior

- Time spent reading
- Time spent studying
- Time spent watching television

Socioemotional Well Being

- Behavior Problems Index
  - aggressive behavior
  - withdrawn or distressed behavior
- Positive Behavior Scale
- parents' reports of disobedience in school or trouble getting along with teachers

Health and Access to Health Care

- whether the child's health was excellent, very good, good, fair, or poor
- whether the child had any limitation on their activities, school attendance or school work
- conditions that a health professional said the child had, either a chronic physical condition (asthma, diabetes, ear infections, anemia) or an emotional, developmental or behavior problem (attention deficit disorder, developmental delay, autism).
- whether the child had a routine checkup last year, was in the hospital at all during the year, and was covered by insurance
- the total number of doctor contacts in the past year

Standardized Tests

- verbal tests—letter-word identification and passage comprehension
- math tests—calculation and applied problems

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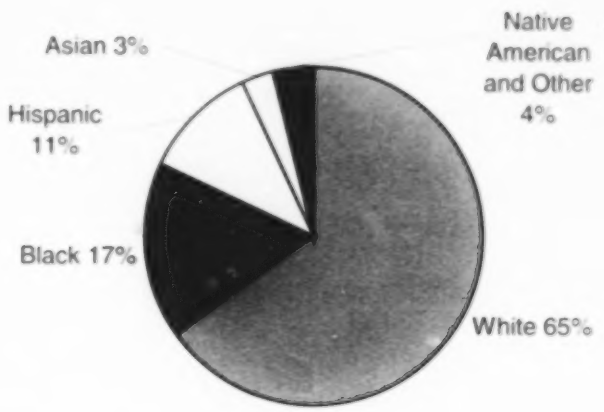
How Well Are Children Doing?

Here are some of the findings about how well children were doing in 1997:

Children's Families

Race/Ethnicity



Average completed education of family head:	13 years (1 year of college)
Average family income:	almost $50,000
Median family income:	$38,500
Income range:	almost nothing to over $1 million
Average number of siblings each child has:	2

Percentage of children:

in 2-parent families in which both parents work:	42.0%
in 2-parent families in which only the father works:	25.0%
in 2-parent families in which only the wife or neither parent works:	4.0%
in families headed by a single working parent:	19.5%
female:	16.5%
male:	3.0%
in families headed by a single non-working parent:	8.0%
female:	7.9%
male:	0.6%

Children's Achievements

As in Lake Wobegon, where "all the children are above average," the children in the study sample scored slightly above average on all the achievement tests. The tests are normed so that the mean across children of each year of age averages to 100. Our children scored a few points higher. This suggests that we have a normal group of children in this study.

Positive Behaviors and Children's Lives

Parents told us that most children are great kids who are easy to get along with. Nine out of ten children are characterized by 10 or more positive characteristics, such as being cheerful and happy, polite, curious, liked by other children, obedient, self-reliant, and neat and careful. Parents also report that for about 47% of children things are going excellently in five or more areas such as health, friendships, and relationships.

In spite of this rosy picture, the children in this sample were not without problems. For children ages 3 through 12, parents reported the following problems:

1 out of 5 are fearful or anxious, unhappy, sad or depressed, or are withdrawn.

2 out of 5 are impulsive, disobedient, and moody.

Almost 1 out of 2 have at least one of these problems.

About 1 in 25 have a behavior problem at school.

Children's Relationships with Parents, Teachers, Peers

Closeness to parents

Parents rated 65% of the children under age 13 as extremely or very close to their parents (including step-parents, adopted parents and father-figures in the household). Parents spend an average of 17 hours a week directly talking, working, and playing with their children. Closeness declines as children grow older. While 76% of infants and toddlers are close, only 59% of school age children are.

Warmth

About 66% of parents reported very warm behaviors with their child, including hugging the child, telling them they love them, spending time together, joking or playing, talking, and telling them they appreciate them at least several times a week in the past month. The nature of the relationship changes as children mature and spend time with peers. Almost 80% of parents reported a lot of warmth with preschool children, compared to 57% of parents of school-age children.

Friendships

The average child in the study had 4 friends. As expected, children generally develop more friendships as they grow older.

# of friends	% of children
0 or 1	12%
2 or 3	39%
4 or more	49%

Activities together

We asked about 13 different types of activities. About 40% of parents did 8 to 13 of them at least once in the past month, while 20% did fewer. The frequency of these activities rises slightly as children age. About 32% of parents of infants and toddlers reported 11 or more activities, compared with 40% of parents of older children.

Activities

Washing or folding clothes
Doing dishes, Cleaning house, Preparing food
Looking at books or reading stories
Talking about the family, Working on homework
Building or repairing something
Playing on the computer or video games
Playing a board game, card game, or puzzle
Playing sports or outdoor activities.

Teachers

About half of parents were involved in 5 or more different activities in the child's school over the past school year. Activities included conferring with the teacher, principal, or counselor, presenting in the child's class or observing or volunteering in the class or school, attending a school event, and attending a PTA meeting.

Only about 4% of children were reported as having school problems. Almost 75% of parents reported regular conversations with their child about school activities, what the child had studied in class, and the child's experiences in school. The amount of conversation between parent and child was strongly related to parental reports of warmth.

Parents' expectations

American parents have high expectations about the amount of education their children will complete. 71% expected their children to complete at least a college degree.

Changes of school

About 5% of children changed schools over the past year: 3.2% made one change, 1.7% two or more changes.

Children's Activities

Children sleep 74 hours a week, spend 25 in school, 9 eating, and 9 in personal care. That leaves about 51 hours a week in discretionary time. Of that time, children spend little time reading or studying and a lot watching TV.

Activity	Hours per Week
reading	1.3 hours
studying	1.7 hours
watching TV	12.0 hours

Children spend more time studying as they age.

Age	Hours per Week
6 years	1.6 hours
9 years	3.2 hours
12 years	3.9 hours

On the other hand, time they spend reading for pleasure changes little as children get older.

Age	Hours per Week
3 years	1.6 hours
12 years	1.4 hours

Television watching time (including videos) increases as children age.

Age	Hours per Week
1 year	6 hours
3 years	13.2 hours
12 years	14.8 hours

Only 1 of 8 children under 13 used the computer in 1997. Computer use occurs primarily among older children (9-12). Among those, 20% used the computer in the previous week.

Age	Hours per Week
6 year	.5 hours
9 years	.8 hours
12 years	1.2 hours

Children's Health

Health

In 1997, 84% of the study children were in excellent or very good health, according to their parents. As they age, more are listed as very good and fewer as excellent, but the proportion in these top two categories remains the same. Half were in excellent health with no activity limitation. About 6% were in fair or poor health or had an activity limitation. The percentage with some limitation on their childhood activities, school attendance or school work grows as children get older, as does the proportion with a developmental or behavioral problem. The proportion of children with a chronic medical or health condition also increases with age, though only some of these conditions affect children's ability to function normally.

Children who have:	infants (<1)	toddlers (1-2)	preschoolers (3-4)	school age (5-12)
a limitation on activities/school	< 2%	2%	3%	6%
a developmental/behavioral problem	2%	4%	5%	12%
a chronic condition	19%	41%	48%	47%
• asthma	4%	9%	11%	11%
• 3 or more ear infections in a year	13%	29%	33%	30%

Children who are:	infants	toddlers	preschoolers	school age
in excellent health, no activity limitations	57%	49%	49%	51%
in fair or poor health or have a limitation on activities	3%	4%	5%	8%

Health Care

The routine doctor visit is critical to a child's general care. About 36% did not have a routine medical checkup, though this varies sharply by age. However, just because they did not have a routine visit does not mean they did not visit for another reason. Overall, only 12% did not visit a doctor for a routine checkup, an illness, or injury at all over the past year. About 4 percent of children were in the hospital at least once in the past year. This is higher for infants and toddlers than for older children. Finally, about 10% of children have no health insurance coverage at the survey date in 1997. This varies little by age, but there is considerable variation in the coverage. Only 82% were actually covered for all 12 months of the previous year. Thus 18% experienced a gap in coverage.

Children who had:	infants	toddlers	preschoolers	school age
no routine checkup	26%	17%	28%	43%
overnight hospital stay	10%	9%	5%	2%
no health insurance	10%	13%	11%	10%

What Matters Most for Children's Achievement and Adjustment?

Children's Families

Education and Parents' Verbal Skills

On average, the household heads have completed 13 years of schooling, or about 1 year of college. The higher the head's level of education, the higher the child's achievement. Each additional year of schooling is associated with a ½ point increase in verbal and math test scores. The verbal ability of the mother is very important. Mothers with greater verbal skills have children with higher verbal and math achievement scores.

Race/ethnic differences

When we compare children whose mothers have similar verbal skills in English, we find only small race and ethnic differences in test scores. On the verbal tests, Hispanic children score 6 to 9 points lower than white, non-Hispanic children, after controlling for a variety of factors. Since there are no such differences on the calculation test, which requires understanding math symbols, not English words, the difference in verbal test scores is likely to be due to language difficulties. Compared with parents of white children, parents of black and Hispanic children report less aggressive or withdrawn behavior.

Family size

On average, there are 3 children under 18 in a child's household. Children from large families do worse. Each additional child is associated with a 1.5 point reduction in the child's score on the verbal tests, but there is no effect on the math tests.

Family structure

Compared to families in which both head and wife are working, children in families with a male breadwinner and wife homemaker score about 3 points higher on the letter-word test. Children do worse in families headed by a non-working single parent, scoring 5 to 6 points lower on the letter word and on the passage comprehension tests. Family structure is not associated with scores on either math test.

Family structure is the only family factor significantly associated with the overall number of behavior problems a child has. Children from families headed by a single parent have more problems than children from two-parent, two-earner families. Children from two-parent families in which the head is not working also have more behavior problems, on average.

Family Income

Family income in 1997 has a small effect on achievement. In families with higher levels of income, children do better. Each additional $10,000 of family income is associated with an increased score on the letter-word test of about 1/7 of a point and of 1/5 point on the calculation test. Family income is not related to behavior problems.

Gender of the child

Girls score about 1 point higher on the verbal and 2 points lower on the math tests than boys. There are no gender differences on overall behavior problems. Girls are reported to have more distress and withdrawn behavior than boys.

Factors Influencing Passage Comprehension Test Scores

for	child's score *increased* by
each 1 hour more per week spent reading	.43
each 1 additional year of household head's schooling	.57
each 1 point increase in mother's test score	.65
each additional school activity parents are involved in	.67
parent's expectation of college completion	6.18

for	child's score *decreased* by
each additional hour watching TV	0.1
each 1 additional sibling	1.9
having a limitation on activities	3.7
single non-working female head of household	5.2
being Hispanic (vs. white, non-Hispanic)	5.6
having a developmental problem	8.4

Factors Influencing Behavior Problems (for children 3 and older)

for	child's behavior problems *changed* by
parent's expectation of college completion	-1.8
being black	-1.8
being Hispanic (vs. white, non-Hispanic)	-1.4
being closer to parents	-0.90
in better health	-0.75
warm relationship	-0.33
1 year older household head	-0.08
having a limitation on activities	1.44
having 1 parent in the household (vs. 2)	1.63
having a developmental problem	6.49

Factors Influencing School Problems (for school-age children)

for	child's behavior problems changed by
having 4 or more friends	-68%
having 2 or more changes of school in the past year	300%

All effects statistically significant in multivariate models controlling for age and gender of child, education, age, and race of head, employment and number of parents, number of children, family income, health of child, and mother's test score.

Parent-Child Relationships

Parents' expectations that their child will go to college are consistently associated with achievement on both the verbal and math tests. Children of parents who expect their child to attend college have scores 6 to 9 points higher on verbal and math tests than children of parents who do not expect college graduation from their children.

Children whose parents report doing more activities with them have higher scores on the applied problems math test, but not on either verbal test. Each additional activity is associated with an increased score on this test of about 1/3 of a point. This suggests that home activities can prepare children for practical problem-solving.

A warm relationship, parents' expectations for college completion and greater closeness to parents are all associated with fewer behavior problems and more positive behaviors on the part of children.

Parents generally report that their children exhibit many positive behaviors. Girls are rated higher, as are children in families where the household head is older. Hispanic parents rate their children more positively than white, non-Hispanic parents. The relationship between parent and child is important. Mothers who are warm, close to their child, who do more activities together and who expect their child to complete college rate the child's behavior more positively. Children who have a developmental delay are rated less positively than children without a developmental delay.

For school-age children, parents' college expectations continue to be strongly linked to verbal and math test scores. However, parental involvement in the school also turns out to be strongly linked to scores on verbal and math tests. For each additional school-related activity parents are involved in, children's scores are 2/3 to one full point higher.

Parental expectations for college and closeness are linked to fewer aggressive and withdrawn behavior problems among school-age children. The number of friends the child has is also associated with less withdrawn behavior and more positive behaviors. Having two or three friends instead of one or two is associated with a reduction of about 1 point on withdrawn behavior, whereas having four or more friends is associated with a reduction of about 1.5 points. Finally, parents who report that things are going very well for their child also report more positive behaviors and fewer behavior problems of either type.

Children of parents with college expectations are 62% less likely to have a school behavior problem, compared with other children. Children with four or more friends are 68% less likely to have a school problem. In addition, we found evidence that changing schools often is detrimental to children's adjustment to school. Children who had two or more school changes over the previous school year are four times as likely to have parents who report a school behavior problem as those with no change of school. This difference is less when children of mothers with the same level of verbal skills are compared. Children with one change are neither more nor less likely to have a school behavior problem.

Educational Activities

We expected that the time children actually spent reading, studying, and watching television would be associated with their achievement test scores, with reading and studying increasing achievement and television viewing reducing it.

Our expectations were supported. Children who read more have scores higher on all tests of verbal and math achievement. Each additional hour per week spent reading is associated with a 1/2 point higher score on the verbal and applied problems tests. Television watching is negatively associated with scores on all the tests, but is significantly negative only for the passage comprehension and applied problems tests. Each additional hour of TV is associated with about 1/10 of a point decline in test score. Studying, in contrast, is not related to scores on any of the tests. Extra studying time may indicate that the child is having problems in an area.

Children's Health

Parents of black, Hispanic and Asian children report them to have a lower overall level of health, compared with white children. Black children are especially disadvantaged. They are 37% less likely than white children to be reported by parents to be in excellent health with no limiting conditions. However, when we examine chronic conditions, black, Hispanic and Asian children are less likely to be reported to have chronic conditions and they are not more likely to have a developmental delay or limitation on their activity. In fact, blacks are less likely to have a behavior condition such as a developmental delay. This leads us to suspect reporting differences by parents rather than underlying health differences as the cause of this phenomenon.

For each additional year of education of the head, a child has a 5% greater likelihood of being in top condition. Each additional $10,000 of income is associated with a 6% greater chance of being in top physical health. To give a more concrete example of the relationship between income and health, 41% of children who are in poverty are in top physical health, compared with 52% of those who are not poor. Finally, birth weight is linked to health. A child who was under 5.5 pounds at birth is 28% less likely to be in top physical health later on compared to a child who was 5.5 pounds or heavier.

The Relationship between Health and Development

The general overall measure of children's health, as reported by parents, was not linked to children's verbal and math achievement. However, it was linked to children's behavior problems. The greater the overall health score, the less likely the child was to have behavior problems, either withdrawn or aggressive. Chronic conditions were not linked to either achievement or behavior problems.

The important health factors related to achievement for children were the presence of health conditions that limited their activities and having a developmental problem such as attention deficit disorder (ADD) or a learning disability. Having an activity limitation was associated with a 4 point reduction and having a developmental problem with an 8 point reduction in the score on the verbal tests. The effect was even larger on the math tests—a reduction of 5 points for having an activity limitation and 8-11 points for having a developmental problem.

As we expected, having a limiting condition or a developmental problem was also strongly associated with the child's score on the behavior problems index. Activity limitations affected only withdrawn behavior; developmental delay affected both aggressive and withdrawn behavior.

Conclusions

Children's cognitive and emotional well-being depend importantly on their health; on their behaviors, such as whether they spend time reading or whether they spend their time watching television; on parents' resources and presence; and on the relationship between the child and the parent. Things over which parents have less control, such as language, education, their own verbal ability, and their child's health, do contribute to children's achievement. Better educated and more verbally able parents had children who achieved at higher levels. Hispanic children were disadvantaged on tests requiring verbal skills but not on the calculation test. Children's health also affects cognitive achievement and emotional well-being. Access to adequate prenatal and well-baby care is critical to children's cognitive development and emotional well-being.

Even after adjusting for those things over which parents have less control, parents matter to the well-being of their children. We found that parents with high expectations for their children and who do things with them have children who achieve at higher levels. Parents with high expectations, who are close to their children, who report a warm relationship, and who do more activities with their children have children who have less aggressive behavior problems, have many good qualities, are less withdrawn, and who seem happier.

How children spend their time matters. Time spent reading is particularly good for their verbal achievement. Time spent in activities with parents contributes to developing practical problem-solving skills.

While many are concerned that parents may be spending less time with children than in the past, the amount of time parents spend with their children per se does not seem to matter as much as the nature of that time and the quality of the relationship. This is good news for busy parents.

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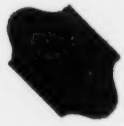

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